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LONGEVITY

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LONGEVITY.

A PAPER READ BEFORE THE
ENGLEWOOD LITERARY SOCIETY,
BY
SHEPPARD HOMANS.

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We read in the 5th chapter of Genesis: "And all the days that Adam lived were 930 years and he died." Also "All the days of Seth were 912 years; and he died." The ages of five other descendants of Adam are then given each of whom lived more than 900 years, and then we come to Methuseleh the oldest age on record. "And all the days of Methuseleh were 969 years; and he died."

After the flood the ages recorded of the patriarchs were much less. Abraham died at the age of 175, Isaac at 180, and Jacob at 147; and Sarah, whose age is the greatest recorded in the Bible of a female, died at 127.

In modern times we have the records, more or less authentic, of many persons who have attained extreme old age. Mr. James Easton, of Salsbury, England, published in 1799 a list containing the names of 1712 persons who had reached the age of 100 years and upwards. In 1826, Mr. Charles Babbage collected 1750 similar cases. Haller cites two cases of extreme age which came under his own observation, one of 152, and the other of 169 years.

I select the following from a list pre-

pared by the late Cornelius Walford containing the names of 208 persons who died at, or above the age of 120 years. Thomas Carn, Shoreditch, England, at the age of 207, in 1588. This case is said to be confirmed by the Parish Registers. If this be true, it is the most remarkable instance of longevity recorded since the flood. 175 years, Louisa Truxo, a negress, Brazil, in 1780; 152 years, Thomas Parr, Shropshire, England, in 1635. In the *Petersburgh Gazette*, a Russian paper published in 1812, the case is recorded of a man who died in the diocese of Ekateroios who attained an age between 200 and 205 years at death.

The age of Dr. Parr, as he was called, appears to be well authenticated. It has the testimony of Harvey who dissected his body and found all the organs in a sound and healthful condition. Charles the First, sent for Dr. Parr, who had become famous by reason of his extreme age. Dr. Parr went to Court where he was feasted, and eating too much, died from a fit of indigestion. He might have lived many years longer—in fact he may be said to have died from an accident.

There would then seem to be abundant evidence that, not only among the patriarchs who lived after the flood, but among those who lived in modern times also, in-

stances are not wanting of deaths approaching the age of 200 years, which would seem to be about the extreme limit possible for man to attain.

Scientific research has demonstrated some remarkable physiological facts which bear upon the duration of human life. It is demonstrated that *Species* never change. Their physiological characteristics are fixed and unalterable. Man at the present day has precisely the same formation, the same organs, the same type in fact, as may be found in mummies embalmed centuries before the Christian Era. The fossil horse is the same as the living animal. Siberia was once peopled by elephants. These elephants have disappeared, but their fossil remains present precisely the same physiological characteristics as those of the living elephants. America was once peopled by mastodons. They have disappeared, but they have not left in their places other, or different mastodons. The type of man, of the horse, of the elephant, and of every other animal living or extinct, has remained unaltered by the revolutions and mutations of the Globe.

Buffon, the celebrated naturalist, first enunciated the theory that the natural life of all animals bears a certain relation to the periods of their growth. This per-

iod is defined by the union of the bones with their *epiphyses*. When this union takes place, the bones, and consequently the animals, cease to grow. M. Flourens, accepting this ingenious theory of Buffon, and having the advantage of later and more correct physiological knowledge, made a series of very interesting experiments by which to determine the length of time after birth when this union of the bones with the epiphyses takes place in different animals. He then found that the natural limit of life in all animals is about five times the period of growth.

Thus the union of bones and epithyses and the consequent natural life of different animals is as follows:

Man grows	20 years.	Natural life,	100 years.
Camel	“ 8 “	“ “	40 “
Horse	“ 5 “	“ “	25 “
Ox	“ 4 “	“ “	20 “
Lion	“ 4 “	“ “	20 “
Dog	“ 2 “	“ “	10 “
Cat	“ 1½ “	“ “	7½ “
Hare	“ 1 “	“ “	5 “

Buffon states: “The man who does not die of accident or disease lives everywhere to 90 or 100 years of age.” Hufeland says: “Nearly all those deaths which take place before the hundreth year are brought on artificially. that is to say, by disease or accident.” Dr. Farr in the 16th Annual Report of the Registrar General of Eng-

land says: "The natural term of human life appears to be 100 years." Finally, the prophet Isaiah says, LXV.-20.—"There shall no more thence be an infant of days, nor an old man that hath not filled his days, for the child shall die an hundred years old."

The extreme limit of life appears to be about twice the natural limit or term. Thus instances have occurred of man living to 200 years, or very nearly, and Buffon relates, with much minuteness, the history of a horse that lived 50 years, and died February 24th, 1774.

How are we to account for the ages recorded in Genesis, of Adam, his sons, and Methuseleh? We cannot disregard the teachings of science, nor need we doubt the statement in Holy Writ. Each has Divine authority. By what theory can we reconcile the two. Simply that the year, or unit of time among the early patriarchs differed from that adopted since the Deluge, which has been twelve calendar months. Hensler, a high authority, shows the strong probability that the year, till the time of Abraham, consisted of three months only, and that not until the time of Joseph was it extended to twelve months. "This assertion" says Hufeland, a still higher authority, "is to a certain degree confirmed by some of the

Eastern nations who still reckon only three months to the year," and besides it would be altogether inexplicable why the life of man should have been shortened three-fourths immediately after the Flood. Moreover the recorded ages when the early patriarchs married was about four times the usual age. Again, with the period of Abraham, we find mention of a duration of life which can still be attained, and which no longer appears extraordinary, especially when we consider the temperate manner in which the patriarchs lived. We think, therefore, that Hufeland has arrived at a correct conclusion when he says that "man can still attain to the same age as ever."

By the Census of 1851 there were living in England and Wales 319 persons (111 males and 208 females) whose reputed ages ranged from 100 to 119 years.

At the instance of Mr. James Thom, a parliamentary commission was appointed to visit each of these alleged centenarians in order to examine the evidences upon which their reputed ages were based, as well as to inquire into the particulars as to their habits, modes of life, etc.

A singular instance of the thoroughness with which Mr. Thom and his commission conducted their inquiries was afforded in the case of a Greenwich pensioner who

had served in the Royal Navy, and whose age was reputed to be 107 years. This sailor, whose name we will assume to have been John Smith, asserted that he was the son of Mary and Thomas Smith, and that the date of the marriage of his parents, as well as the date of his own birth and christening, could be found in the Parish Registers of his native place. Mr. Thom examined these Parish Registers and found the several dates agreed with the old sailor's statements, and there appears to have been no doubt that he was the son of the Thomas and Mary Smith, as claimed. Mr. Thom, however, was not entirely satisfied. A further examination of the same Registers showed that a year or two after the recorded birth of John Smith son of Thomas and Mary Smith, the child died and was buried in the Parish Church Yard. A year or two subsequently another son of the same Thomas and Mary was born and was christened John. This John afterward died and was buried and a further search showed the record of the birth and christening of a third John, son of Thomas and Mary Smith, and this was undoubtedly the old sailor himself who was thus proved to be only 97 years, instead of 107 as claimed.

Mr. Thom and his commission visited every one or nearly every one of the al-

leged centenarians, and examined the evidences of age, mode of life, etc., in each case. It is remarkable that the evidences as to actual age were defective, or entirely wanting, and also that great diversities appeared as to modes of living, diet, etc. Some of the oldest used spirits and tobacco—others abstained entirely. In two particulars they were all alike—in the habit of early rising and in the avoidance of undue excitements or excesses of any character.

This same Mr. Thom investigated the case of a Captain Lahrbush who created quite a sensation in New York where he died some twenty years ago, at the alleged age of one hundred and eleven years. This Captain Lahrbush claimed that he was an officer in a certain Scotch Regiment, British Army, and was present with his Regiment at the treaty of Tilsit which was signed in 1807. Mr. Thom first proved that the Scotch Regiment named was not on the Continent in 1807. He then searched the records of the British Army, and found that the only officer named Lahrbush who had been entered on its rolls was cashiered for *youthful* indiscretions in 1818. A full discussion of these points was published in the New York *Tribune*.

WHAT IS LIFE?

There are some things which the mind of man cannot compass. Life, death, annihilation, eternity, space, are all beyond our comprehension. At the utmost we can only grasp some of their *attributes*. Of their essence we must always remain in ignorance.

One attribute of life is that it does not commence with each new individual or each new being. Life commences only once for each new species. Reckoning from the first created pair of each species, life never begins again, it is continued. Life is transmitted in each species by parents to their offspring, and with life certain unalterable, unchanging characteristics which belong exclusively to that species, which are never found in any other species. Species remain with unaltered organs, formation, etc., and species disappear, but their peculiar physiological characteristics never re-appear in any other animals or beings.

Lord Bacon compares life to a flame. "Man is constantly consuming and being consumed." Hufeland says: "Destructive and creative powers are engaged, with a never-ceasing activity, in a continuous struggle within us; and every moment of our existence is a singular mixture of annihilation and new creation. As long as

the vital power retains its freshness and energy, the living plastic power will have the superiority and the body will increase and approach nearer to perfection, and at last, the vital power being lessened, the consumption will begin to exceed the renovation, and decay, degeneration and in the end, total dissolution will unavoidably follow. The life of man has been divided into two nearly equal parts, one of increase, the other of decrease. Each of these parts is divided into two others—hence the four ages, infancy, youth, manhood and old age. Lastly each of these four ages is sub-divided into two. A first infancy from birth to age 10. A second from 10 to 20; this is adolescense. A first youth from 20 to 30; a second from 30 to 40. A first manhood from 40 to 55; a second from 55 to 70. A first old age from 70 to 85; a second from 85 to 100. The first infancy is the period of dentition. The second infancy ends at 20 when the bones cease to grow and are united with their epiphyses. Youth is prolonged to 40 because it is only about that age when the body has attained its greatest strength—it is the *virile* epoct of life. The first manhood from 40 to 55 is the period of invigoration, which continues however till 65 or 70. At 70 old age begins. This is the period when the forces in reserve are

drawn upon. When there can be little if any recuperation, when man lives upon his *reserve*. The unknown *force* of life diminishes more and more as age advances. The duration of life in any being will be proportionate to the innate quantity of vital power, the greater or less firmness of its organs, the speedier or slower consumption, and the perfect or imperfect restoration.

Long life has at all times been the chief desire, the principle object of mankind. How can it be secured? How can the flame be supplied with fuel? These are questions which have always engaged the attention of the deepest thinkers. Perhaps the most interesting and instructive example of the ability to prolong life and preserve health is given in the writings of a wise old man who owed his century of existence to a strict adherence to the principles of sobriety and moderation.

Luigi Cornaro was born at Venice about the year 1465, though the exact date of his birth is variously given. He died April 26th, 1566, at Padua. He belonged to one of the old families in the city. One of the Cornari, Marco, who died just a hundred years before Luigi's birth, was Doge; and three other bearers of the same name attained the same distinction after his death. He began life with a bad constitu-

tion, and a long course of excesses had, by the time he reached the age of 35, reduced him to a state of extreme misery. For four or five years he remained in constant bodily and mental suffering. Gout began to lay hold of him; he was tormented by pains in the stomach and by perpetual feverishness and thirst. His physicians pointed out to him that his chronic ailments must have their cause in his habitually disordered life, and urged him again and again to change it. He was long convinced of the truth of what they said to him before putting their advice into practice. For a while he pretended to follow it, still eating and drinking as before, and concealed the fact from his doctors—"as all patients do," he adds with some humor.

At last he found the strength of will to adhere strictly to the diet and mode of life prescribed for him; and at the end of a year he found himself, instead of a broken-down, hopeless invalid, unfit for either work or enjoyment, a healthy and singularly active and happy man. He then came to the natural conclusion that the regimen which had overcome the effects of excesses and repaired the natural weakness of his constitution must be the one to keep him permanently in good health; and from that time onwards, dur-

ing the sixty years which remained to him of life, he never, except in the rarest instances, and then to his hurt, swerved from it. He more than completed his 80th year before he set himself down to write his own experiences for the benefit of others. During forty years he had lived a life of almost unbroken health and happiness—a life which contrasted as much with that which he had himself led in his earlier days as with that which he saw commonly lived by others around him. One consideration weighed upon him especially—namely, the value of the later as compared with the earlier years of life. Many men, he argued, by the time they had acquired the knowledge, judgment and experience which qualified them to be useful in the world, are physically, in consequence of their careless living worn out. Men who might live, in full possession of all their faculties, to the age of ninety or a hundred, pass away at the age of fifty or sixty. Many who, as he puts it, might “make the world beautiful,” are cut off untimely through the same cause. This feeling, joined to the amiable vanity of a happy and prosperous old age, prompted him to lay his experiences before the world.

Cornaro's regimen—which consisted of eggs, soup, bread, pancakes and such like

food, with wine—was, as he tells us, intended for himself alone. All people should live temperately, but the temperance of one man is the excess of another. Cornaro's method is the simple one, that each man should find out for himself what is the suitable quantity of food and drink for himself, and live accordingly. The charm of Cornaro's narrative consists in the garrulous naivette with which he sets forth his simple creed and practice. Italy, he says, was suffering from three great evils—first, from flattery and ceremonies; secondly, from the effects of Lutheran doctrines; thirdly, from debauchery. These three evils, or rather "cruel monsters of human life," have destroyed respectively social sincerity; secondly, the religion of the soul; thirdly, the health of the body. The first two plagues he leaves to be dealt with by some "gentilispiriti," who will banish them from the world; the third he undertakes to extirpate himself, being convinced that Italy, before his death, will return to her former "fair and holy manners." To this end he gives his own practice as an example to be followed—at least in its aim and spirit. His daily allowance of food was three rolls, the yolk of an egg, with meat and soup—the whole weighing twelve ounces; his daily allowance of wine was fourteen ounces. On

one occasion, after he had slightly increased the quantities, he became in a few days "choleric and melancholy," and soon fell into a violent fever, from which he only recovered by returning to his former regimen. He never ate or drank to the extent of his appetite; avoided extremes of heat and cold; was careful to have sufficient sleep.

To keep clear of grief, melancholy, hatred, and other perturbations of the mind was also an essential part of his system; though temperance in eating and drinking will do much to counteract mental troubles, as well as to neutralize the effects of bodily hardships. Once when powerful enemies brought a suit against him, he kept his equanimity and won his case in the end; while his brother, who had led an irregular life, died of anxiety while the case was still going on. If men were but temperate as he was himself, they would live to be 100 years old. He himself intended to do so, and to die at last, not of disease, but of "*pura risoluzione*." If he had had a good constitution to start with, he would have reached 120 years instead of only a hundred. He did, in fact, die at the age of a hundred, if he did not surpass it.

Cornaro gives one curious reason for desiring long life. "If one is a Cardinal he

may become Pope by age. If of importance to the Republic he may become Chief of it."

Cornaro finishes his first "Discourse" thus:

"Such is divine sobriety, friend of nature, daughter of reason, sister of virtue, companion of noble, modest, temperate, regular life, and strict in all its actions. It is the root of life, of health, of joy, of address, of skill, and of every action worthy of a noble mind. Laws, divine and human, favor it; irregularities, and the perils attendant upon them, fly before it, as the clouds before the sun. Its beauty attracts every noble heart; its practice ensures to all a happy and lasting existence; we know it to be the amiable and benign guardian of life, be it rich or poor; it leads the rich to observe moderation, the poor, economy; the young man to a firmer and surer hope of life; it protects the old man from death. Sobriety purifies the feelings, quickens the faculties, cheers the mind, strengthens the memory. The soul, almost freed by it from its earthly load, enjoys a larger liberty."

At ninety-five, the closing words of his fourth and last "Discourse" still display his native regard for *length of days*.

"I conclude by declaring that great age may be so useful and agreeable to men,

that I believe that I should have been wanting in charity if I had not taken pains to point out by what means they may prolong their days, and as each can boast of happiness of his own, I shall not cease to cry to them, 'Live, live long.'"

From the foregoing we may see, if we wish long life and good health, how important it is to observe the principles of sobriety and moderation. Not only moderation in eating and drinking, but moderation in the undue excitements of passion and feeling. There is one disease, unknown in the scientific classification by physicians which in the present day kills more patients than any other. That disease is *worry*. The patriarchs attained extreme old age, because of their simple, pastoral life, with avoidance of undue excitements or worry. There is no case on record of a man with violent temper, or who was affected with the disease, worry, who attained extreme age.

In addition to moderation and sobriety of living, and of the due observance of sanitary laws, I would add another very important factor, and that is the necessity of moderate and regular exercise.

A recent writer, Edwin Checkley, in his most interesting and instructive work "A natural method of physical training," states that not one person out of a hun-

dred knows how to *breathe* properly. He urges the inflation of the chest and the closing of the nostrils when breathing, which should be drawn at regular and long intervals. I well remember when a young man seeing Indian papooses whose mouths were kept closed by bandages which their mothers had fastened under their chins and around their heads. I did not then know the object. Checkley has explained it. It is to teach the children how to breathe.

It is wonderful how exhilarating are the effects of following Checkley's simple instructions, and how beneficial, as I can attest from personal experience.

Checkley lays down an admirable course of physical training and exercise without apparatus, and urges that each set of muscles should be duly strengthened and made supple. He is opposed to the usual gymnastic exercises with apparatus, as being costly, unnecessary and tending to develop some sets of muscles unduly, while other sets are neglected. Athletes are generally developed abnormally, and by violent exercises run great risks of injuring the heart. Athletes rarely attain old age.

Here is a portrait by Hufeland of a man destined to long life.

"He has a proper and well-proportioned stature, without, however, being too tall.

He is rather of the middle size, and somewhat thick-set. His complexion is not too florid: At any rate too much ruddiness in youth is seldom a sign of longevity. His hair approaches rather to the fair than the black; his skin is strong, but not rough. *His head is not too big*; he has large veins at the extremities, and his shoulders are rather round than flat. His neck is not too long; his abdomen does not project; and his hands are large, but not too deeply cleft. His foot is rather thick than long; and his legs are firm and round. He has also a broad arched chest; a strong voice, and the faculty of retaining his breath for a long time without difficulty. In general, there is a complete harmony in all his parts. His senses are good but not too delicate: his pulse is slow and regular. *His stomach is excellent*, his appetite good, and his digestion easy. The joys of the table are to him of importance; they tune his mind to serenity, and his soul partakes in the pleasure which they communicate. He does not eat merely for the sake of eating; but each meal is an hour of daily festivity; a kind of delight, attended with this advantage with regard to others, and it does not make him poorer, but richer. *He eats slowly*, and has not too much thirst. Too great thirst is always a sign of rapid self-

consumption. In general, he is serene, loquacious, active, susceptible of joy, love, and hope, but insensible to the impressions of hatred, anger, and avarice. His passions never become too violent or destructive. If he ever gives way to anger he experiences rather an useful glow of warmth, an artificial and gentle fever, without an overflowing of the bile. He is fond also of enjoyment, particularly calm meditation and agreeable speculation, is an optimist, a friend to nature, and domestic felicity, and has no thirst after honors or riches; and banishes all thoughts of to-morrow."

I would add that in my opinion every person, at least every one that is not afflicted with organic trouble or who has neglected too long the observance of the laws of nature, has within himself the power to prolong his own existence, as well as to improve and to secure his own good health. In life insurance we find that the best risks are not the most robust men, not the athletes, but are the men, who, without organic trouble or inherited tendencies to disease, are yet obliged to take care of themselves. Men who like Cornaro lives with sobriety.

I close this paper with a quotation from Addison, who in his Vision of Mirza, must have had in mind a Mortality Table.

“The bridge thou seest, said he, is *Human Life*; consider it attentively. Upon a more leisurely survey of it, I found that it consisted of *three score and ten entire arches*, with several broken arches, which, added to those that were entire, made up the number *about an hundred*. As I was counting the arches, the Genius told me that this bridge consisted at first of a *thousand arches*; but that a great flood swept away the rest, and left the bridge in the ruinous condition I now beheld it. But tell me further, said he, what thou discoverest on it. I see multitudes of people passing over it, said I, and a black cloud hanging on each end of it. As I looked more attentively, I saw several of the passengers dropping through the bridge into the great tide that flowed underneath it; and upon further examination perceived that there were innumerable trap-doors that lay concealed in the bridge, which the passengers no sooner trod upon, but they fell through them into the tide, and immediately disappeared. These hidden pit-falls were set very thick at the entrance of the bridge, so that throngs of people no sooner break through the cloud, but many of them fall into them. They grew *thinner towards the middle*, but multiplied and laid closer together towards the end of the arches that

were entire. There were indeed, some persons, but their number was very small, that continued a kind of hobbling march of the broken arches, but fell through one after another, being quite tired and spent with so long a walk."





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